

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:
 - generating a generic, markup language independent, description of an event and an element in associated with a source document using a generic, device-independent document description markup language, the event representing a form submission user interaction with the element source document;
 - associating meta-information about a structure of the source document with the generically described event;
 - transforming the generic description of the event and the element into markup language specific representations of the event and the element, respectively, the transforming being controlled at least in part by the associated meta-information;
 - sending at least one of the markup language specific representations to a browser running on a client device;
 - receiving from the client device the generically described event coded as at least one HTTP-request parameter based on the form submission user interaction occurring at the browser, the at least one HTTP-request parameter including an event name and an event value derived from attributes of the generic description defining a resource processing the event and a sequence of the event; and
 - invoking a process based on the received at least one HTTP-request parameter.
2. (Canceled)
3. (Original) The method of claim 1 wherein the source document is a web document.

4. (Currently Amended) The method of claim 3 wherein the generic, device-independent document description markup language has generic, markup language independent, description includes a generic, device-independent document description language having a syntax based on XML.

5. (Previously Presented) The method of claim 4 wherein the associating comprises manually associating meta-information with the generically described event.

6. (Previously Presented) The method of claim 1 wherein the meta-information indicates alternative representations of semantically one element.

7. (Previously Presented) The method of claim 1 wherein the meta-information enables elements to be declared to be optional and to be omitted on a client device with insufficient resources.

8. (Previously Presented) The method of claim 1 wherein the transforming comprises automatically transforming the generic description.

9. (Original) The method of claim 1 further comprising fragmenting the source document into two or more subdocuments and transforming the fragments into one or more markup language specific representations appropriate to available resources of the client device and an execution environment of the client device.

10. (Previously Presented) The method of claim 1 wherein the markup language specific representations comprise at least one of: an HTML representation, a WML representation, and a cHTML representation.

11. (Canceled)

12. (Canceled)

13. (Currently Amended) An apparatus comprising a server device configured to:
generate a generic, markup language independent, description of an event and an element
in associated with a source document using a generic, device-independent document description
markup language, the event representing a form submission user interaction with the element
source document;

associate meta-information about a structure of the source document with the generically described event;

transform the generic description of the event and the element into markup language specific representations of the event and the element, respectively, the transforming being controlled at least in part by the associated meta-information;

send at least one of the markup language specific representations to a browser running on a client device;

receive from the client device the generically described event coded as at least one HTTP-request parameter based on the form submission user interaction occurring at the browser, the at least one HTTP-request parameter including an event name and an event value derived from attributes of the generic description defining a resource processing the event and a sequence of the event; and

invoke a process based on the received at least one HTTP-request parameter.

14. (Previously Presented) The apparatus of claim 13 wherein the server device is further configured to fragment the source document into two or more subdocuments and transform the fragments into one or more markup language specific representations appropriate to available resources of the client device and an execution environment of the client device.

15. to 21. (Canceled)

22. (Previously Presented) The method of claim 1, wherein the transforming is controlled at least in part by style sheets having access to client device information.

23. (Previously Presented) A computer-readable medium storing instructions that, when executed, cause at least one processor to:

generate a generic, markup language independent, description of an event and an element in associated with a source document using a generic, device-independent document description markup language, the event representing a form submission user interaction with the element source document;

associate meta-information about a structure of the source document with the generically described event;

transform the generic description of the event and the element into markup language specific representations of the event and the element, respectively, the transforming being controlled at least in part by the associated meta-information;

send at least one of the markup language specific representations to a browser running on a client device;

receive from the client device the generically described event coded as at least one HTTP-request parameter based on the form submission user interaction occurring at the browser, the at least one HTTP-request parameter including an event name and an event value derived from attributes of the generic description defining a resource processing the event and a sequence of the event; and

invoke a process based on the received at least one HTTP-request parameter.

24. (Canceled)

25. (New) A method comprising:

generating a description of an event and an element in a source document using a generic, device-independent document description markup language that has a syntax based on XML, the event representing a form submission user interaction with the element;

associating meta-information about a structure of the source document with the generically described event, the meta information indicating alternate representations of the element and enabling the element to be declared optional and omitted on a client device with insufficient resources;

transforming the generic description of the event and the element into markup language specific representations of the event and the element, respectively, the transforming being controlled at least in part by the associated meta-information;

fragmenting the source document into two or more subdocuments and transforming the fragments into one or more markup language specific representations appropriate to available resources of the client device and an execution environment of the client device;

sending at least one of the markup language specific representations to a browser running on a client device;

receiving from the client device the generically described event coded as at least one HTTP-request parameter based on the form submission user interaction occurring at the browser, the at least one HTTP-request parameter including an event name and an event value derived from attributes of the generic description defining a resource processing the event and a sequence of the event; and

invoking a process based on the received at least one HTTP-request parameter.